REMARKS/ARGUMENTS

Claims 2, 4, 6, 7, 9-12, 19, 21, 22, 24, 26, and 27 have been examined and rejected. The present response makes no changes to the claims. Accordingly, claims 2, 4, 6, 7, 9-12, 19, 21, 22, 24, 26, and 27 remain pending. Reconsideration and allowance of all pending claims are respectfully requested. The undersigned thanks the Examiner for his courtesy in the telephone interview of September 13, 2004. It is believed that agreement was reached on the outstanding issues subject to the results of a new search and complete consideration of the below remarks which are a summary of the points raised by the undersigned in the interview.

Claim 2 has been rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,384,963 issued to Ackerman, et al. (hereinafter "Ackerman"). A threshold requirement for an anticipation rejection is that the cited reference discloses all of the recited features of the rejected claim. Here, claim 2 recites Raman amplification with various special characteristics. One of the characteristics is that:

> either 1) for a selected signal to noise ratio, there is a greater four-wave mixing product suppression level than would be achieved using only said second optical pump energy source to obtain said total gain level, or 2) for a selected four-wave mixing product suppression level, there is a higher signal to noise ratio than would be achieved using only said second optical pump energy source to obtain said total gain level.

The rejection concedes that this limitation of claim 2 is not found in the cited Ackerman patent but argues that it is inherent in the operation of Ackerman. The assertion of inherency is respectfully traversed. For example, the Ackerman patent does not either explicitly or implicitly teach one how to construct a Raman amplifier having any given four-wave mixing product suppression characteristic. By contrast there is plentiful disclosure on this point in the present application including Fig. 2 and the text describing Fig. 2 on pages 9 through 11 of the originally filed application. Further relevant text was added in the amendment of June 3, 2003. Accordingly, Ackerman is not prior art and this rejection should be withdrawn.

Claims 2, 4, 7, 9, 10, 12, 19, 22, 24, and 27 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,292,288 issued to Akasaka, et al (hereinafter "Akasaka"). Independent claims 2, 19, and 24 all recite a limitation similar to the one highlighted above in reference to claim 4. Akasaka does not disclose or suggest this limitation. Again the rejection relies on inherency. This inherency assertion is also traversed because the Akasaka patent also does not teach how to construct a Raman amplifier with a selected four-wave mixing characteristic. This is sufficient reason to find claims 2, 4, 19, and 24 allowable over Akasaka. Claims 7, 9, 10, 12, 22, and 27 are allowable for at least the reason of their dependence from their allowable parent claims.

Claims 4, 6, 7, 9, 10, 11-12, 19, 21, 22, 24, 26, and 27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,356,383, issued to Cornwell, Jr. et al. (hereinafter "Cornwell") in view of Ackerman. This rejection is believed to be improper for reasons similar to those given in relation to claim 2 and the Ackerman patent. The rejection relies upon inherency to supply disclosure missing from the Ackerman patent and the Cornwell patent. As discussed, the Ackerman patent does not disclose or suggest the previously quoted limitation, which is found in independent claims 4, 19, and 24. The Cornwell patent does not remedy this deficiency. Accordingly, claims 4, 19, and 24 are allowable over the art of record. Claims 6, 7, 9, 10, 11-12, 21, 22, 26, and 27 are allowable for at least the reason of their dependence from the allowable parent claims.

Claims 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornwell in view of Ackerman and Aoki. Claims 7, 9, and 10 are dependent from claim 4. The Aoki reference does not remedy the deficiencies of Cornwell and Ackerman. This rejection thus should also be withdrawn.

Claims 6, 21, and 26 have been rejected under 35 U.S.C. 103(a) as being unpatentable over either Akasaka in view of, or alternately, Cornwell in view of Ackerman and further in view of a paper by Lewis, et al. Claims 6, 21, and 26 depend from independent claims 4, 19, and 24 respectively. The deficiencies of the Akasaka, Cornwell, and Ackerman patents with respect to

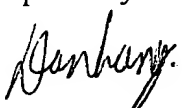
these independent claims has already been discussed. The Lewis paper does not remedy these deficiencies. Accordingly, claims 6, 21, and 26 are also allowable.

Claim 11 has been objected to on the grounds that it introduces "said fiber" as a limitation where "fiber" has already been mentioned in a previous parent claim. The parent claim of claim 11, claim 4 recites a "fiber" but only inferentially. Claim 4 does not include the "fiber" as part of the apparatus. By contrast, claim 11 recites "fiber" positively as a part of the claimed apparatus. Accordingly, the recitation of claim 11 is proper and the objection should be withdrawn.

Conclusion

For the foregoing reasons, Applicant believes all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8694.

Respectfully submitted,



Dan H. Lang
Reg. No. 38,531

RITTER, LANG & KAPLAN LLP
12930 Saratoga Ave., Suite D1
Saratoga, CA 95070
Tel: 408-446-8690
Fax: 408-446-8691